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उत्तम कृषि व्यवहार रीतियों की अपेक्षाएँ — भारतगैप

भाग 4 चाय आधारित

Requirements for Good Agricultural Practices — IndiaGAP

Part 4 Tea Base

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Agricultural Systems and Management Sectional Committee, FAD 22

FOREWORD

This Indian Standard (Part 4) was adopted by the Bureau of Indian Standards, after the draft finalized by the Agricultural Systems and Management Sectional Committee had been approved by the Food and Agriculture Division Council

Considerable milestones have been reached in productivity of farm produce in the country. Concerns about food safety and quality, environmental protection, worker safety and welfare have also gained importance. Thus, it is desirable to set up control and compliance systems for various kinds of farm produce covering horticulture, floriculture, food grains, aquaculture, livestock, poultry, etc. In this context, it is necessary to pay attention to the quality of production practices requiring minute attention at different aspects of production, storage, handling and distribution.

There are different systems and standards available for control measures for processing of food meant for human consumption and feeds for animals producing food for human consumption. The areas where appropriate control measures need to be strengthened are farms producing raw material such as food grains, fruits and vegetables, floriculture produce, aquaculture produce, livestock products, etc, to ensure sustained supply of produce of the desirable quality.

Although grade standards on size, shape, colour and local preferences are available for most of the agricultural produce marketed and consumed in India, their quality in terms of maturity standards, residues of pesticides and other contaminants, microbial loads, etc, have not been adequately covered. Good Agricultural Practices (GAP) have a bearing on these parameters. In other words, a farm producing raw material for direct consumption or for further processing and following GAP would have an advantage in terms of safety and quality over the other farms. Thus, these practices would add value to the produce.

In India, agricultural practices are highly localized occupations and display a lot of variability in cultural practices and varietal preferences across regions. Further, with the opening up of the world market, there is a flow of trade in the agricultural products. It is, therefore, necessary to define and assign certain common minimum standards to facilitate trade in these products and to win the confidence of the consumers within the country and outside.

Such standards envisaging focused approach for implementing good agricultural practices, traceability, etc, through appropriate infrastructure, record keeping and monitoring would reap following broad benefits:

a) Development of basic infrastructure at the field level,
b) Build up culture for good agricultural practices by the farmers,
c) Uniform approach across farms regardless of their sizes,
d) Increased awareness among the farmers as well as the consumers about the need for consumption of good quality and safe food,
e) Traceability through complete integration of food chain,
f) Improvement in the environment as well as soil fertility,
g) Worker safety and welfare,
h) Reputation in the international market as a producer of good quality and safe produce, and
j) Overcoming the Technical Barriers to Trade (TBTs).

With this in view, this Indian Standard has been formulated to standardize Tea Based Agricultural Practices in India, keeping in mind the best of international practices and suiting the needs of the Indian farmer.

This standard is published in nine parts. The other parts in the series are:

Part 1 Crop base
Part 2 Fruit and vegetable base

(*Continued on third cover*)

Indian Standard

REQUIREMENTS FOR GOOD AGRICULTURAL PRACTICES — INDIAGAP

PART 4 TEA BASE

1 SCOPE

This standard (Part 4) covers the control points and compliance criteria, necessary to be followed by the producers (individual growers and/or members of a grower group) of tea.

2 TERMINOLOGY

For the purpose of this standard the following definitions shall apply.

2.1 Good Agriculture Practices — Practices that address environmental, economic and social sustainability for on-farm processes, and result in safe and quality food and non-food agricultural products.

2.2 Applicant Grower/Grower Group — Individual/ organization that has applied for certification to IndiaGAP certification body.

2.3 Pesticide — Plant protection products such as insecticides, fungicides, weedicides, etc.

2.4 Hazard — A biological, chemical, physical agent in, or condition of, food with the potential to cause an adverse health effect.

2.5 Individual Grower — A person/organization legally responsible for on farm production, who retains ownership of all the produce covered in the IndiaGAP licence.

2.6 Inspection — An examination of all agricultural practices in order to verify compliance to requirements specified in this standard.

2.7 Water, Irrigation — Water which is artificially applied in the process of irrigation. It does not include precipitation.

2.8 Water, Potable — Water which does not contain objectionable pollution, contamination, minerals, or infection, and is considered satisfactory for domestic consumption.

2.9 Produce — The material recovered from harvesting of a crop.

2.10 Product — Processed and value added produce.

2.11 Record — Document showing objective evidence of the tasks performed and results achieved.

2.12 Self Inspection — Internal inspection of the registered product crop carried out by the grower on his/ her farm using control points and compliance criteria.

2.13 Traceability — The ability to trace the history, use or location of a product (that is the origin of materials and parts, processes applied to the product, or its distribution and placement after delivery) by means of a record.

2.14 Worker — Any person on the farm that has been contracted to carry out a task. This includes farm owners and managers.

2.15 Inorganic Fertilizer — Commercial chemical fertilizer.

2.16 Grower Group — A recognized group of growers applying for certification with an internal procedure and internal control of all the members registered to the IndiaGAP requirements, which and complying the requirements as specified in this standard.

2.17 Field — Separate unit of land within a farm.

2.18 Farm — A farm is an agricultural production unit or group of agricultural production units; covered by same operational procedures, farm management.

2.19 Environment — Surroundings in which an activity takes place including air, water, land, natural resources, flora, fauna, humans, and their interrelation.

2.20 Customer — A customer is anyone who purchases products or services from a supplier.

2.21 Crop Rotation — The practice of growing different crops in succession on the same land according to pre-defined plan.

2.22 Certification — All actions leading to the issuance of an IndiaGAP licence.

2.23 Crop — Plants cultivated or organisms grown and/ or harvested for economic purpose.

3 CONTROL POINTS AND COMPLIANCE CRITERIA

3.1 Control points and compliance criteria required to be followed by the applicant producer (individual grower and/or member of a grower group) as well as by the certification body for independent verification of the agricultural practices that have gone into the production of the produce are given in Annex A. In addition, the applicant producer (individual grower and/or member of a grower group) shall demonstrate compliance with all applicable statutory and regulatory requirements.

3.2 In addition to **3.1**, the applicant producer (individual grower and/or member of a grower group) shall demonstrate compliance with Control Points and Compliance Criteria laid down in IS 15930 (Part I) 'Indian Standard – Requirements for Good Agricultural Practices – IndiaGAP Part 1 Crop Base'.

3.3 These criteria are marked as 'Major' or 'Minor' or 'Reco'. The criteria marked as 'Major' have a definite effect on the safety and quality of the produce and shall, therefore, be complied with, or shall give adequate assurance about the safety and quality of the produce. The criteria marked as 'Minor', though have a bearing on quality, are those which, if implemented, would provide an advantage to the assessment for IndiaGAP certification. The criteria marked as 'Reco', are those, which though may not have direct bearing on safety and quality of produce but may have other benefits to the producer and are recommended for implementation and are advisory in nature.

3.4 For the purpose of verification, a grading pattern given below shall be followed for grant of IndiaGAP licence:

Category of Licence	*Compliance of Major Requirements Percent*	*Compliance of Minor Requirements Percent*
lndiaGAP — A	100	90
IndiaGAP — B	100	80
lndiaGAP — C	100	75

4 BIS IndiaGAP CERTIFICATION

4.1 BIS IndiaGAP certification shall be as prescribed under the provisions of *Bureau of Indian Standards Act,* 2016 and Rules and Regulations framed thereunder. The details of the conditions under which the licence may be granted to producer (individual grower and/or member of a grower group) may be obtained from the Bureau of Indian Standards.

ANNEX A

(*Clause* 3.1)

CONTROL POINTS AND COMPLIANCE CRITERIA

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
A-1	**PLANTING MATERIAL**			
A-1.1	**Choice of Variety or Rootstock**			
A-1.1.1	*Planting Material Awareness*	Minor	The producer shall be aware of the importance of effective crop husbandry in relation to the vegetatively propagated (VP) cuttings/grafts (root stock, scion) and seed quality of the crop.	Farmers should demonstrate availability of documents/literature to support his understanding about the selection of the planting material used.
A-1.1.2	*Selection of Varieties*	Reco	The choice of stem for vegetatively propagated cuttings/seeds should be approved by Tea Board and should be of appropriate maturity.	The choice of stem for vegetatively propagated cuttings/seeds must consider maturity and the source should be demonstrated with evidence.
A-2	**SITE HISTORY AND SITE MANAGEMENT**			
A-2.1	**Site History**			
A-2.1.1	*Deforestation*	Major	The new farm shall not have been deforested from the date of implementation of this standard.	There is evidence that the farmed area has neither been derived from primary forest deforested nor from secondary forest without compensation.
A-2.1.2	*Bio-diversity Conservation*	Minor	New plantings shall comply with the relevant local and national regulation with respect to land use and bio-diversity conservation.	There is documented evidence that the new plantations comply with the relevant local and national regulation with respect to land use and biodiversity conservation.
A-2.1.3	*Good Resource Conservation*	Minor	In the absence of relevant regulation on land use and bio-diversity conservation, new tea plantings shall be compatible with good resource conservation practice proven in comparable locations.	New tea plantings are compatible with good resource conservation practice proven in comparable locations.
A-2.1.4	*Re-planting interval*	Minor	Re-planting interval shall be complied with.	Re-planting interval must be recorded (1 year for uprooted areas).
A-3	**SOIL AND SUBSTRATE MANAGEMENT**			
A-3.1	**Soil Fumigation (Not Applicable, If No Soil Fumigation)**			
A-3.1.1	*Justification*	Minor	There shall be a written justification for the use of soil fumigants.	There is written evidence and justification for the use of soil fumigants including location, date, active ingredient, doses, method of application and operator. The use of methyl bromide as soil fumigant is not permitted.
A-3.1.2	*Alternatives to Chemical*	Minor	Alternatives to chemical fumigation shall be explored	The producer is able to demonstrate assessment of alternatives (biological

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
	Fumigation		before resorting to the use of chemical fumigants.	methods) to chemical soil fumigation through technical knowledge, written evidence or accepted local practice.
A-3.2	**Substrates (Not Applicable, If No Substrate Are Used)**			
A-3.2.1	*Participation in Substrate Recycling*	Reco	The producer should participate in substrate recycling programmes, for substrates where available.	The producer keeps records with quantities recycled and dates. Invoices/loading dockets are acceptable. If there is no participation in a recycling program available, it should be justified.
A-3.2.2	*Record of Location of Sterilization*	Minor	If chemicals are used to sterilize substrates for reuse, the location of sterilization shall be recorded.	When the substrates are sterilized on the farm, the name or reference of the field, orchard or greenhouse are recorded, if sterilized off farm then the name and location of the company, which sterilizes the substrates.
A-3.2.3	*Sterilization Methods*	Major	If chemicals are used to sterilize substrates for reuse, the date of sterilization, type of chemical, method of sterilization, name of the operator and pre-planting interval shall be recorded.	The following are all correctly recorded: the dates of sterilization (day/month/year); the name and active ingredient; the machinery (for example 1000 l-tank etc); the method (for example drenching, fogging); the operator's name (the person who actually applied the chemicals and did the sterilization); and the pre-planting interval.
A-3.2.4	*Steaming*	Reco	When substrates are reused, steaming should be used for sterilization.	When substrates are reused, documentary evidence shows that steaming is the option used.
A-3.2.5	*Traceability of Substrates*	Minor	Substrates shall be traceable to the source and shall not come from designated conservation areas.	There are records that prove the origin of the substrates being used. These records demonstrate that the substrates do not come from designated conservation areas.
A-4	**FERTILIZER USE**			
A-4.1	**Advice on Quantity and Type**			
A-4.1.1	*Application Methods*	Minor	The most appropriate and efficient method of application shall be followed.	The fertilizer application method (broadcasting/ring application etc. or as recommended by the tea institutes) should take in to account the slope of the lands, rain forecasts and other such factors for the efficient utilization by the bushes as well as contamination through loss in to the surrounding environment.
A-4.2	**Organic Fertilizer**			
A-4.2.1	*Composting*	Minor	The animal manure and other organic materials shall be properly composted prior to application as per NSOP.	Evidence to show compliance with NSOP.
A-4.2.2	*Prevention of*	Major	Proper measures shall be in	Grower must take appropriate

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
	Organic Residues		place to prevent the residues of organic material on the leaves after spraying liquid fertilizer.	measures to avoid leaf contamination. The organic matter in the solution/suspension should be allowed to settle down (sink) and only the filtered liquid is used for the spray. A visual check for presence of organic matter residues on the leaves is conducted when required.
A-4.3	**Records of Application**			
A-4.3.1	*Record of Nutrient Applications*	Minor	All applications of soil and foliar fertilizers, both organic and inorganic shall be recorded including field, orchard or greenhouse reference.	Records are kept of all fertilizer applications, detailing the geographical area, the name or reference of the field, orchard or greenhouse where the registered product crop is located. Also applicable where fertigation is used.
A-4.3.2	*Dates of Nutrient Application*	Minor	All application dates of soil and foliar fertilizers, both organic and inorganic, shall be recorded,	Detailed in the records of all fertilizer applications are the exact dates (day/month/year) of the application.
A-4.3.3	*Record of Applied Nutrient Types*	Minor	All applications of soil and foliar fertilizers, both organic and inorganic shall be recorded including applied fertilizer types.	Detailed in the records of all fertilizer applications are the trade name, type of fertilizer (for example N, P, K) or concentrations (for example 17-17-17).
A-4.3.4	*Record of Applied Quantities*	Minor	All applied quantities of soil and foliar fertilizers, both organic and inorganic, shall be recorded.	Detailed in the records of all fertilizer application is the amount of product to be applied in weight or volume. The actual application made must be recorded, as this is not necessarily the same as the recommendation.
A-4.3.5	*Record of Method of Application*	Minor	All applications of soil and foliar fertilizers, both organic and inorganic, shall be recorded including the method of application.	Detailed in the records of all fertilizer applications are the application machinery type used and the method (for example *via* the irrigation or mechanical distribution).
A-4.3.6	*Record of Operator Details*	Minor	All applications of soil and foliar fertilizers, both organic and inorganic, shall be recorded including the operator details.	Detailed in the records of all fertilizer applications is the name of the operator who has applied the fertilizer. If it is a one-man operation, (the producer) and the producer is the one doing the applications, it is acceptable to record the operator details only once.
A-4.3.7	*Record of Plant Growth Regulator and, Anti-Transpirants Application*	Minor	Record of foliar application of plant growth regulators and anti-transpirants shall be maintained	Verify records of foliar application of plant growth regulators and anti-transpirants including name of chemical applied, applied quantity, date of application, etc.
A-4.4	**Storage of Fertilizers/Nutrients**			
A-4.4.1	*Inventory of Fertilizers*	Minor	There shall be an inorganic fertilizer stock inventory or record of use up to date and available on the farm.	A stock inventory which indicates the contents of the store (type and amount) is available and it is updated at least every 3 months.

Sl No.	**Item**	**Level**	**IndiaGAP Requirements**	**Compliance Criteria**
A-4.4.2	*Segregation of Fertilizers from Plant Protection Products*	Minor	Inorganic fertilizers shall be stored separately from plant protection products,	The minimum requirement is to prevent cross contamination between fertilizers and plant protection products by the use of a physical barrier. If fertilizers that are applied together with plant protection products (that is micronutrients or foliar fertilizers) are packed in a sealed container it can be stored with plant protection products.
A-4.4.3	*Protection of Storage Area*	Minor	Inorganic fertilizers shall be stored in a covered area.	The covered area is suitable to protect all inorganic fertilizers, that is powders, granules or liquids, from atmospheric influences like sunlight, frost and rain. Based on risk assessment (fertilizer type, weather conditions, temporary storage), plastic coverage could be acceptable. Storage cannot be directly on the soil. It is allowed to store lime and gypsum in the field for a day or two before spreading.
A-4.4.4	*Hygiene of Storage Area*	Minor	Inorganic fertilizers shall be stored in a clean area.	Inorganic fertilizers, that is powders, granules or liquids, are stored in an area that is free from waste, does not constitute a breeding place for rodents, and where spillage and leakage is cleared away.
A-4.4.5	*Humidity in Storage Area*	Minor	Inorganic fertilizers shall be stored in a dry area.	The storage area for all inorganic fertilizers, that is powders, granules or liquids, is well ventilated and free from rainwater or heavy condensation. No storage directly on the soil.
A-4.4.6	*Reduction in Risk of Contamination of Water*	Minor	Inorganic fertilizers shall be stored in an appropriate manner, which reduces the risk of contamination of water courses.	All inorganic fertilizers, that is powders, granules or liquids are stored in a manner which poses minimum risk of contamination to water sources, that is liquid fertilizer stores must be surrounded by an impermeable barrier (according to national and local legislation, or to contain a capacity to 110 percent of the volume of the largest container if there is no applicable legislation), and consideration has been given to the proximity to water courses and flood risks, etc.
A-4.4.7	*Reduction in Risk of Contamination of Environment*	Minor	Organic fertilizers shall be stored in an appropriate manner, which reduces the risk of contamination of the environment.	Organic fertilizers, stored on the farm, must be stored in a designated area. Appropriate measures have been taken to prevent contamination of surface water (such as concrete foundation and walls, or specially built leak proof

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
				container, etc) or must be stored at least 25 m from surface water bodies in particular.
A-4.4.8	*Segregation from Produce*	Major	Inorganic and organic fertilizers shall be stored separate from farm produce harvested-fresh or dry, as applicable.	Fertilizers cannot be stored with farm produce harvested-fresh or dry, as applicable.
A-5	**IRRIGATION/FERTIGATION**			
A-5.1	**Irrigation/Fertigation Method**			
A-5.1.1	*Method of Irrigation / Fertigation*	Minor	The producer shall justify the method of irrigation/ fertigation used in light of water conservation.	The idea is to avoid wasting water. The irrigation / fertigation system used is the most efficient available for the crop and accepted as such within good agricultural practice.
A-5.1.2	*Water Optimization*	Reco	There should be a water management plan to optimize water usage and reduce waste.	A documented plan is available which outlines the steps and actions to be taken to implement the management plan.
A-5.1.3	*Record of Irrigation/ Fertigation*	Reco	Records of irrigation/fertigation water usage should be maintained.	Records are kept which indicate the date and volume per water meter or per irrigation unit. If the producer works with irrigation programmes, the calculated and actual irrigated water should be written down in the records.
A-6	**PLANT PROTECTION**			
A-6.1	**Basic Elements**			
A-6.1.1	*Instructions on Crop Protection Products*	Major	Clear instructions shall be in place for not using crop protection products within 10 meters (or less as required by law)	There are in place clear instructions and documented records that all persons involved in crop protection products usage are well informed for not using crop protection products within 10 meters (or more if required by law).
A-6.2	**Choice of Plant Protection Products**			
A-6.2.1	*Awareness of Banned Chemicals*	Major	The farmer shall be aware of the banned chemicals and there shall be a process that prevents chemicals that are banned in the target country from being used on crops destined for sale in that country.	The documented plant protection product application records confirm that no plant protection product that have been used within the last 12 months on the crops grown under IndiaGAP destined for sale has been prohibited by the target country.
A-6.2.2	*Use of Non-Chemical Alternatives*	Minor	Non-chemical alternatives shall be explored.	There is evidence that non-chemical alternatives have been explored. Where available and proved to be effective the grower prefers biological control methods for pest and disease control such as use of natural enemies, repellents, etc.
A-6.3	**Records of Application**			
A-6.3.1	*Procedures for*	Major	There shall be procedures	There are clear documented

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
	Re-Entry of Persons		dealing with re-entry of persons on the farm after application of plant protection products.	procedures, which regulate all the re-entry intervals of persons after plant protection products are applied to the crops according to the label instructions. Where no re-entry information is available on the label, there are no specific requirements.
A-6.4	**Plant Protection Product Transportation**			
A-6.4.1	*Transportation of Crop Protection Products*	Minor	Crop protection products shall be transported safely, with attention to minimizing human and environmental contamination and if applicable, transported in accordance with local regulations.	When transportation of crop protection products is done by farm or group of compliant farms, transportation complies to local regulations on chemical transport, or at least in a proper manner to prevent spilling and other accidents.
A-7	**HARVESTING**			
A-7.1	**Hygiene**			
A-7.1.1	*Hygiene Procedure for Harvesting*	Major	A hygiene procedure shall be in place for the harvesting process covering reusable harvesting containers, tools and equipment and handling areas.	All harvesting tools, equipment (machinery) and reusable harvesting containers, transportation bags, weighing areas, transfer areas are cleaned and maintained, and a cleaning schedule is in place to prevent contamination. There are separate bags or bins for harvesting of green leaves and if the bags are reused, are they adequately cleaned prior to use for plucking. The workers have been trained for cleaning of empty containers and their storage after use.
A-7.1.2	*Hygiene of Transport Vehicles*	Major	The hygiene procedure shall take into consideration transporting vehicles.	Farm vehicles used for transport of harvested tea leaves, are cleaned and maintained, and a cleaning schedule is in place to prevent contamination (that is soil, dirt, manure, spills, etc). This includes containers/bags used during transport, loading and unloading.
A-7.1.3	*Personal Hygiene*	Major	The hygiene procedure shall take into consideration personal hygiene and contamination coming from the workers' personal things carried in the harvesting containers.	The workers are trained not to carry any personal medication, foodstuff, pest control agents (for example against leeches), oils, foot wear inside the green leaf basket/harvesting containers. Training records are available and compliance observed during site visit.
A-7.1.4	*Access to Clean Water*	Major	Harvest workers shall have access to clean hand-washing equipment in the vicinity of their work.	Fixed or mobile hand washing equipment to clean and disinfect hands is accessible to harvest workers.
A-7.1.5	*Access to Clean Toilets*	Minor	Harvest workers shall have access to clean toilets in the vicinity of their work.	Fixed or mobile toilets (including pit latrines) constructed of materials that are easy to clean and with catch basins

Sl No.	**Item**	**Level**	**IndiaGAP Requirements**	**Compliance Criteria**
				designed to prevent contamination in the field are accessible to harvest workers within 500 m and they are in a good state of hygiene. Where an employee is working independently, the 500 m distance can be modified to allow the presence of toilets at an increased distance, providing that there is reasonable and adequate transport available to the worker.
A-7.2	**Harvesting Procedure**			
A-7.2.1	*Training of Harvesting Workers*	Minor	The harvesting workers shall be trained for green leaf plucking in order to maintain the leaf quality and the bush health.	Workers used for plucking green leaves are trained and such training programs have been scheduled, carried out and recorded.
A-7.2.2	*Management Plan for Harvesting*	Minor	A management plan shall exist for leaf plucking, mechanical harvesting and for pruning based on the leaf quality and bush health management.	The records of the pruning, mechanical harvesting and the plucking cycles are available and up-to-date. The plucking and harvesting cycles, leaves and buds to be plucked are decided on a technical (scientific) basis, so as to maintain the required leaf quality as well as bush health.
A-7.2.3	*Harvesting Time*	Major	Plucking shall be done at the right time based on the management plan.	The management plan should ensure that the leaves are plucked and harvested at the time defined as per the management plan. Plucking time is harmonized with the crop protection product application taking into consideration the pre-harvest intervals.
A-7.2.4	*Harvesting Methods*	Minor	The right plucking method shall be used based on the management plan.	The plucking/harvesting method (hand/shears/ machine) is clearly described in the management plan. This method should also ensure that the bush health is not affected (with respect to shoot damage and to maintenance of leave levels).
A-7.2.5	*Training of Harvesting Workers*	Minor	The harvesting workers shall be trained to use tools/machines when required in the harvesting.	Workers are trained for the correct and safe use of tools/machines. Records of training are available and include name and signature of participants.
A-7.2.6	*Maintenance of Tools*	Minor	Maintenance and correct use of tools/machines shall be included in the management plan.	The records of the mechanical harvesting tools/machines maintenance are available and up-to-date in the management plan and include the guidelines for correct use.
A-7.3	**Fresh Leaf Storage and Transportation**			
A-7.3.1	*Storage and Transport Conditions*	Minor	The temporary storage (field storage and handling area storage) and the transportation method of the fresh tea leaves shall assure protection against	The temporary storage or shelter is able to protect the harvested fresh tea leaves against rain, drying and scorching. Ventilation and sufficient storage space is available in the

Sl No.	**Item**	**Level**	**IndiaGAP Requirements**	**Compliance Criteria**
			direct sun, rain, avoid contamination and allow sufficient space and ventilation.	temporary storage, during transport and in the handling areas to avoid damage to the leaves.
A-7.3.2	*Measures to Avoid Compacting and Crushing*	Minor	There shall be sufficient measures to avoid compacting and crushing in the harvesting and transport containers.	The maximum weights that can go in the containers is mentioned on the containers (bags, bins, etc) in order to prevent crushing of green leaves.
A-7.3.3	*Time delay in Transportation*	Minor	The harvested tea leaves shall reach the processing plant on the same day of harvesting.	The time between harvesting of tea leaves and arrival at the processing plant is not longer than 8 h. No storage of harvested leaves on field is allowed over night.
A-7.4	**Harvested Tea Measurements**			
A-7.4.1	*Calibration of Weights and Measures*	Major	The weights and/or volume-measures that define the weight or volume of harvested tea, shall be calibrated at least once a year.	The weights and/or volume-measures that define the weight or volume of harvested tea are calibrated. There are documented records of verification of calibration within the last 12 months that has been carried out by specialized technicians.
A-8	**PROCESSING UNIT**			
A-8.1	**General**			
A-8.1.1	*Traceability*	Major	If the tea grower does not process his own tea, the traceability shall be ensured at the outsourced processing unit.	When the tea farm or group of compliant farms does not process its own tea, the outsourced tea manufacturing process must have a documented system to ensure that traceability of this tea is maintained.
A-8.2	**Principles of Hygiene**			
A-8.2.1	*Risk Assessment*	Minor	A risk analysis shall be performed for the processing unit, including hygiene aspects and occupational health and safety issues.	There is a documented and up to date (reviewed annually) risk assessment covering physical, chemical and microbiological contaminants originating from various sources such as waste bins, water, bags and human transmissible diseases.
A-8.2.2	*Risk Management*	Minor	The hygiene procedure shall be implemented for the processing unit operation.	The farm manager or other nominated person is responsible for implementation of the hygiene procedure as a direct result of the produce handling hygiene risk analysis.
A-8.3	**Personal Hygiene**			
A-8.3.1	*Worker Instructions*	Major	Workers shall receive basic instructions in hygiene before handling tea.	There must be evidence that the workers received training, whether verbal or written. Training must be documented.
A-8.3.2	*Implementation of Hygiene Instructions*	Minor	Workers shall implement the hygiene instructions for handling produce.	There is evidence that the workers are complying with the hygiene instructions regarding personal cleanliness and clothing, that is hand

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
				washing, wearing of jewellery and fingernail length and cleaning, etc; personal behaviour, that is no smoking, spitting, eating, chewing, perfumes, etc. Unless exclusion from produce handling declaration exists for each registered product.
A-8.3.3	*Protective Clothing*	Reco	All workers should wear outer garments suitable for the operation to avoid contamination.	All workers wear outer garments (for example smocks, aprons, sleeves, gloves) that are suitable for the operation according to the risk analysis. This will depend on the product and operation.
A-8.3.4	*Cleaning of Clothes*	Minor	The protective clothing (outer garments) shall be changed and/or regularly cleaned to avoid cross-contamination according to the risk analysis.	The outer garments are changed and/or regularly cleaned according to the risk analysis from **8.2.1**
A-8.3.5	*Smoking/Eating Instructions*	Minor	Smoking, eating, chewing and drinking shall be confined to designated areas.	Smoking, eating, chewing and drinking are confined to designated areas (Drinking water is the exception).
A-8.3.6	*Signages*	Minor	There shall be signs with the main hygiene instructions inside the packing facilities, clearly displayed for workers and visitors.	Signs with the main hygiene instructions must be visibly displayed in the packing facility.
A-8.4	**Sanitary Facilities**			
A-8.4.1	*Access to Clean Toilets*	Major	Workers in the packing facility shall have access to clean toilets and hand washing facilities in the vicinity of their work.	Toilets in a good state of hygiene must not open directly onto the produce handling area, unless the door is self-closing. Hand washing facilities, containing non-perfumed soap, water and hand dry facilities must be accessible and close by the toilets.
A-8.4.2	*Access to Hand Washing Facilities*	Major	Signs shall be clearly displayed instructing workers to wash their hands before returning to work.	Signs must be visible with clear instructions that hands must be washed before handling products, especially after using toilets, eating, etc.
A-8.4.3	*Changing Rooms*	Reco	There should be suitable changing facilities for the workers.	The changing facilities must be used to change clothing and protective outer garments as required.
A-8.4.4	*Lockers*	Reco	There should be lockable storage facilities for the workers.	Secure storage facilities must be provided at the changing facility to protect the workers' personal belongings.
A-8.5	**Processing and Storage Areas**			
A-8.5.1	*Maintenance of Processing Equipment*	Major	Processing unit facilities and equipment shall be cleaned and maintained so as to prevent contamination.	Processing facilities and equipment (that is packing lines and machinery, walls, floors, storage areas, pallets, plastic sheets, etc) should be cleaned

Sl No.	**Item**	**Level**	**IndiaGAP Requirements**	**Compliance Criteria**
				and/or maintained according to a cleaning schedule, to prevent contamination, and documented records are kept.
A-8.5.2	*Cleaning of Machines*	Major	The machines used for processing shall be cleaned adequately, and the workers involved in such operations shall be trained properly in order to carry out effective cleaning operations	The processing operations manual explains the cleaning operations of the machinery used for tea processing. The workers involved in these cleaning operations should be trained according to the quality manual. Records are available for cleaning operations and for cleanliness inspections.
A-8.5.3	*Disinfection of Machines*	Major	All equipment that come into direct contact with tea, such as rolling tables, Crushing, Tearing and Curling (CTC) machinery, fermenting floor/trays, floor of the rolling and fermenting area and the containers used for transfer of semi processed tea shall be regularly disinfected.	All equipment that come into direct contact with tea, such as the rolling tables, CTC machinery, fermenting floors/trays, and the floor areas are disinfected regularly with steam or with disinfectant (after each batch) to avoid microbial contamination.
A-8.5.4	*Cleaning of Storage Areas*	Minor	Storage areas shall be clearly identified and cleaned periodically.	The storage areas for green leaves prior to processing have been identified by the processing operations manual and cleaning schedules have been implemented. The cleaning check records are available and up to date
A-8.5.5	*Waste Disposal*	Reco	Rejected green leaves and waste material should be stored in designated areas, which are routinely cleaned.	Rejected green leaves and waste material are stored in designated areas, which are routinely cleaned to prevent tea contamination. Documented cleaning records are kept.
A-8.5.6	*Approval of Disinfectants*	Major	Disinfectants and cleaning agents used shall be approved for the use in food industry and dose rates shall be followed correctly.	Disinfectants and cleaning agents must be approved for the use in the food industry and label instructions must be followed. Record of usage to be maintained.
A-8.5.7	*Segregation of Disinfectants*	Minor	Disinfectants, cleaning agents, etc shall be kept in a designated area, separate from green leaves and packing materials.	Disinfectants, cleaning agents, etc are kept in a designated area separate and apart from where tea is packed, to avoid chemical contamination of tea.
A-8.5.8	*Prevention of Contamination*	Major	Contamination of tea with lubricants of the machinery shall be avoided?	Lubricants that come into contact with areas where leaves also come in contact must be of food grade (for example lubricants that are used in the overhead conveyor belts, blower fans, CTC machines and all other processing machines/equipments). For the critical areas/places where is high chance of contamination a monitoring schedule is available.
A-8.5.9	*Control of*	Major	Physical hazards in green leaves	Physical hazards in the green leaves

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
	Physical Hazards		shall be controlled before processing.	(for example stones, metal/ plastic/ glass pieces) should be separated by sifting of the withered leaves prior to rolling as well as during the final sorting and grading.
A-8.5.10	*Breakage Safe Lamps*	Minor	Breakage safe lamps or lamps with a protective cap shall be used in all storage and handling areas.	Light bulbs and fixtures suspended above tea or packing material are of a safety type or are protected/shielded so as to prevent contamination of product in case of breakage.
A-8.5.11	*Hygiene of Packing Material Storage*	Minor	Packing materials shall be clean and stored in clean and hygienic conditions.	Packing materials (including re-useable crates) are stored in a clean and hygienic area, to prevent product contamination until used.
A-8.5.12	*Maintenance of Drying System*	Minor	The drying system shall be well maintained according to the processing operations manual.	The air heating system for the dryers is maintained (for example insulation, heat transfer area, type of fuel used, combustion control, etc) for efficient energy use.
A-8.5.13	*Complete Burning of Fuel*	Minor	In case of direct heaters the complete burning of the fuel shall be ensured.	In case of direct heating of the air for the dryers the complete burning of the fuel should be ensured. The heating system should be periodically maintained and tested by the manufacturer and the records are available for the same.
A-8.5.14	*Restriction to Domestic Animals*	Major	Access of domestic animals to the facilities shall be restricted.	Domestic animal access to facilities is restricted, to prevent tea contamination.
A-8.5.15	*Visitor Awareness on Hygiene*	Minor	All subcontractors and visitors shall be aware of the relevant demands on personal hygiene.	There is evidence that the company visitor personal hygiene procedures and requirements are officially communicated to visitors and subcontractors (that is the company visitor personal hygiene procedures are in a visible place where all visitors or subcontractors may read them).
A-8.6	**Processing of Tea**			
A-8.6.1	*Worker Awareness of Hygiene Procedures*	Minor	All processing operations shall be explained in a processing operations manual and the workers involved in such operations shall be trained properly on the technical aspects as well as hygienic aspects.	The Processing Operations Manual clearly explains all processing operations (withering, blanching, cutting, tearing and curling, rolling, roll breaking, separation, firing, grading, packing, etc) and the optimum conditions required in order to maintain/optimize the quality of the final product.
A-8.6.2	*Compliance with Processing Operations*	Minor	Processing operations shall be carried out according to the specifications as laid down in the processing operations	Processing operations (withering, blanching, crushing, tearing and curling, rolling, roll breaking, separation, firing, grading, etc)

Sl No.	**Item**	**Level**	**IndiaGAP Requirements**	**Compliance Criteria**
			manual.	implemented according to the specifications laid down in the processing operations manual for an optimum quality product.
A-8.6.3	*Optimum Withering of Leaves*	Minor	Green leaf drying shall be managed to ensure optimum physical and chemical withering of leaves.	During withering, air parameters and uniformity of wither should be managed in accordance to the processing operations manual to ensure final product quality requirements.
A-8.6.4	*Cleanliness in Transferring Processes*	Minor	Cleanliness shall be maintained during all the transferring steps of processing in order to ensure that the raw material or the partially processed green tea is free from any contaminants. Handling methods shall be such that they minimize the risk of contamination.	All workers involved in the processing of tea must work according to the processing operations manual, where all handling operations are included. These handling operations are explained/displayed by signs/drawings wherever applicable.
A-8.6.5	*Blanching Conditions*	Minor	Adequate temperature and time combination shall be used for blanching (steaming/roasting) of green leaves in order to inactivate the enzymes to prevent further enzymatic reactions.	The processing operations manual has clearly stated the temperature combination that optimizes the quality of green tea. Records are maintained that show the monitoring of temperature and time combination of each processed batch of green tea. Not applicable when black tea is the final product.
A-8.6.6	*Fermentation/ Drying Conditions*	Minor	Fermentation and drying operations shall be carried out under best conditions of energy use and hygiene conditions.	Optimum fermenting or oxidation parameters (for example extent of rolling or cutting tearing and curling, temperature, duration, etc) are standardized for different seasons and for different raw materials. The drying temperature (in-let and exhaust) and duration are maintained and standardized to obtain a good final product quality, to optimize energy use and maintain the best hygiene conditions.
A-8.6.7	*Work Environment*	Major	The right working and operating environment shall be maintained in the processing locations.	Processing environment follows the Processing Operations Manual requirements (for example sufficient fresh air available in the fermenting area, less humid and well lit grading and sorting area, etc).
A-8.6.8	*Prevention of Physical Hazards*	Major	Sufficient measures shall be in place to avoid chances of physical hazards in the processing area.	There are sufficient measures in place to avoid chances of physical hazards (for example plastic, metal and glass, wood pieces) in the processing area. Training records of workers must include knowledge of this.

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
A-8.7	**Processing Water**			
A-8.7.1	*Use of Potable Water*	Major	The water used for steam generation shall be potable and clean.	Water is disinfected/cleaned properly prior to boiling or clean water is used for this purpose. No contaminants are introduced during the processing and the equipments and the boiler units are cleaned adequately. Cleaning records are available. Not applicable when black tea is the final product.
A-8.7.2	*Source of Water*	Major	The source of water used for fermentation shall be potable or declared suitable by the competent authorities.	Within the last 12 months a water analysis by a laboratory has been carried out and the levels of the parameters analyzed are within accepted WHO thresholds or are accepted as safe for the food industry by the competent authorities.
A-8.8	**Quality Control**			
A-8.8.1	*Use of Natural/ Artificial Flavours*	Major	The natural and artificial flavours used for the processing of different flavoured teas shall be approved for tea flavouring in India and in the country where the final product is intended to be traded.	There is a list of flavours used in the production process and their product specifications are available. The flavours are approved in the food industry for tea flavouring in India and in the country where the final product is intended to be traded. Processor must demonstrate compliance via copy of applicable legislation.
A-8.8.2	*Record of Natural/Artificial Flavours*	Minor	The list of natural and artificial flavours used for the processing of different flavoured teas and the amount used per batch shall be recorded.	The flavour quantities used per batch of tea are recorded, applied dose must not exceed allowed levels. An up-to-date mass balance is recorded for the total amount of purchased flavours and for the amount that has been used in the processing. This record should be in line with the stock inventory of each flavour used.
A-8.8.3	*Training of Key Staff for Food Safety*	Major	The key staff and/or supervisors appointed for critical operations in regard with food safety and quality shall be trained and be aware of the specifications of the process.	The technically responsible person(s) for the production and handling process is/are able to demonstrate competence and knowledge with regard to the application of the processing steps, grading, packing, storage, etc.
A-8.8.4	*Storage Plan*	Major	A specific storage plan shall be in place for longer term final packed product storage.	Where longer term storage takes place, the producer has to demonstrate compliance by means of records detailing the regular checking and follow up actions, such as : regular monitoring of temperature and condition of product, including investigation of any changes. Bird and rodent activity, water ingress, and hot spots within the heap must have been acted upon and remedied. Not

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
				applicable when no longer term storage.
A-8.8.5	*Stock Rotation*	Reco	Stock rotation should be managed.	The first in first out principle must be followed for raw products as well as packed products.
A-8.8.6	*Calibration of Equipment*	Minor	There shall be a process for calibrating equipment.	Equipment for weighing, cooling, etc, must be calibrated according to the risk analysis.
A-8.9	**Rodent and Bird Control**			
A-8.9.1	*Prevention of Pest Contamination*	Minor	Facilities, packaging storage areas and surrounding areas shall be monitored, kept clean and maintained to avoid pest contamination (rodents, etc).	All facilities and surrounding areas must be regularly monitored and kept clean (packaging material areas must also be dry), with control measures in place to prevent tea contamination by pests, and documented pest control records maintained.
A-8.9.2	*Site Plans for Baits*	Minor	Site plans with bait points and/or traps, shall be available.	Site plan showing bait points must exist. Not applicable when there is justification for not using bait on farm.
A-8.9.3	*Prevention of Access to Non-Target Species*	Minor	Baits shall be placed in such a manner that non-target species do not have access.	Visual observation. Non-targeted species must not have access to the bait.
A-8.9.4	*Record of Pest Control Inspection*	Minor	Detailed records of pest control inspections and necessary actions taken, shall be kept.	Records of pest control inspections and follow up action plan(s). The producer can have his own records. Inspections must take place, whenever evidence of pests present. In case of vermin, the facility must have a contact number or evidence of in-house capability to control pests.
A-9	**WORKER HEALTH, SAFETY AND WELFARE**			
A-9.1	**Hazards, First Aid, Data Sheets, Protective Clothing/Equipment**			
A-9.1.1	*Prevention of Accidents*	Major	Adequate precautions shall be taken, to prevent on farm accidents during operation of farm equipments/ machinery.	Check for availability of protective gears, safety mechanism like safety bars, nets, display boards, operating instructions, etc.
A-9.1.2	*Accident and Emergency Procedures*	Minor	Accident and emergency procedures shall exist; and they shall be visually displayed and communicated to all persons associated with the farm activities.	Permanent accident procedures must be clearly displayed in accessible, and visible location(s). These instructions are available in the predominant language(s) of the workforce and/or pictograms. The procedures must identify, if appropriate the following : a) Farm's map reference or farm address b) Contact person(s) c) Location of the nearest means of communication (telephone, radio) d) An up-to-date list of relevant phone numbers (police, ambulance, hospital, fire-brigade, access to

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
				emergency health care on site or by means of transport, electricity and water supplier); e) How and where to contact the local medical services, Hospital and other emergency services. f) Location of fire extinguisher; g) Emergency exits; h) Emergency cut-offs for electricity, gas and water supplies; and j) How to report accidents or dangerous incidents.
A-9.2	**Worker Welfare**			
A-9.2.1	*Promotion of Safe Working Conditions*	Major	Appropriate actions shall be taken to promote safe and healthy working conditions.	There is a documented action plan that refers to the actions that have been taken to promote safe and healthy working conditions and who the responsible person is.
A-9.2.2	*First Aid Information*	Minor	Symptoms of intoxication and first-aid information for each product shall be readily available.	There is in place symptoms of intoxication and first-aid information for each product available on site.
A-10	**WASTE AND POLLUTION MANAGEMENT, RECYCLING AND RE-USE**			
A-10.1	**Re-use of Tea By-products**			
A-10.1.1	*Use of Tea By-Products*	Minor	Tea by-products shall be re-used.	Tea by-products must be re-used.
A-10.2	**Waste and Pollution Action Plan**			
A-10.2.1	*Disposal of Household Waste*	Major	There shall be a plan for the proper disposal of household waste from the labour quarters within the tea plantation.	There is a plan and measures/actions in place for the correct disposal of the domestic and other wastes generated in the labour quarters within the tea garden.
A-11	**ENVIRONMENT AND CONSERVATION**			
A-11.1	**Impact of Farming on the Environment**			
A-11.1.1	*Prohibition of De-Forestation*	Major	Deforestation of primary and secondary forests shall be prohibited.	Deforestation of primary forest is prohibited. If required, the applicable laws and regulatory procedures must be followed and proof must be documented.
A-11.1.2	*Possibility of Re-Forestation*	Reco	Areas in the farm not suitable for tea production should be reforested.	All areas in the farm not suitable for tea production should be reforested.
A-11.1.3	*Forest Conservation*	Minor	Forest patches shall be conserved.	All forest patches not used for tea plantations should be conserved.
A-11.1.4	*Watershed Conservation*	Minor	Watersheds shall be protected and conserved.	All watersheds belonging to the farm should be protected and conserved.
A-11.1.5	*Shades of Tree Species*	Minor	Native or well-adapted tree species shall be used as shade for the tea.	Native or well-adapted tree species must be preferred as shade for the tea.

Sl No.	Item	Level	IndiaGAP Requirements	Compliance Criteria
A-11.1.6	*Native Vegetation*	Minor	Native vegetation shall be allowed to grow along streams.	Native vegetation is allowed to grow along streams to control erosion, filter out agrochemicals and protect wildlife habitat.
A-11.1.7	*Protection of Endangered Species*	Minor	Threatened and endangered species and habitats shall be protected, including adequate measures to restrict hunting or commercial collection of flora and fauna.	There are in place effective measures to restrict hunting or commercial collection of flora and fauna.
A-11.1.8	*Communication with Public Park Managers*	Minor	If the farm is within two kilometres of a designated park or biological corridor, there shall be evidence that the producer has communication with the public park managers.	Farms within a distance of two kilometres of a designated park or biological corridor should have communication with the park authorities and there should be no legal challenges to the farms´ location or operation.
A-11.1.9	*Eco and Cultural Preservation*	Reco	Areas of ecological, social, cultural or religious significance should be clearly identified, delineated and preserved.	Areas of ecological, social, cultural or religious significance should be clearly identified, delineated and preserved.
A-11.2	**Energy use**			
A-11.2.1	*Monitoring of Energy Use*	Minor	There shall be a plan in action to monitor the use of energy.	A system measuring the use energy is in place.
A-11.2.2	*Energy Conservation*	Minor	The farm, group of registered farms, or processing unit shall demonstrate measures to conserve or use energy more efficiently in energy intensive activities.	Documentary evidence exists showing an efficient use of energy in the whole processing unit operations.
A-11.2.3	*Energy Savings*	Reco	There should be a plan in action to monitor the savings of energy.	A system measuring the savings of energy is in place by reduction in consumption and substitution of non-renewable sources of energy by renewable ones.
A-11.2.4	*Wood Fuel Management*	Minor	If fire woods are used as fuel for tea firing, it shall come from managed woodlots or pruning from within the farm itself, and not from native forests, unmanaged community forests, watersheds or protected areas.	When fire woods are used as fuel for tea firing, it must come from managed woodlots or pruning from within the farm itself, and not from native forests, unmanaged community forests, watersheds or protected areas.
A-12	**COMPLAINT FORM**			
A-12.1	*Storage of Tea Samples*	Major	There shall be in place, a system where representative lot samples of tea (with reference codes) are kept and to be analyzed in case of any complaint.	There is a system in place where representative lot samples of tea (with reference codes) are kept to be analyzed for any chemical residues in case of any complaint. Samples to be kept for at least one year under recommended storage conditions.

ANNEX B

(*Foreword*)

INDIAN STANDARDS WHICH FACILITATE IMPLEMENTATION OF THIS STANDARD

IS No.	*Title*
609 : 1955	Code of practice for improvement of existing structures used or intended to be used for food grain storage
2491 : 2013	Food hygiene — General principles — Code of Practice (*third revision*)
4015 : 1998	Guide for handling cases of pesticide poisoning (*first revision*)
5503	General requirements for silos for grain storage:
(Part 1) : 1969	Constructional requirements
(Part 2) : 1969	Grain handling equipment and accessories
5686 : 1970	Code of practice for handling and storage of oilseeds
5985 : 1985	Code of practice for handling and storage of bagged fertilizers (*first revision*)
6028 : 2002 / ISO 931 : 1980	Green bananas — Guide to storage and transport (*second revision*)
6151	Storage management code:
(Part 2) : 1971	General care in handling and storage of agricultural produce and inputs
(Part 3) : 1976	Specific care in handling and storage of agricultural produce and inputs
6399 : 1971	Code of practice for construction of coffee seed storage structures
6669 : 2001 / ISO 1212 : 1995	Apples — Guide for cold storage (*first revision*)
6670 : 2018	Guide for storage of potatoes
7191 : 2001 / ISO 5524 : 1991	Tomatoes — Guide for cold storage and refrigerated transport (*first revision*)
7192 : 1974	Guide for storage of citrus fruits
7247	Code of Practice for fumigation of agricultural produce:
(Part 1) : 1974	Methyl bromide
(Part 3) : 1974	Aluminium phosphide
(Part 4) : 1975	Ethylene dichloride and carbon tetrachloride mixture
(Part 5) : 1985	General requirements
7252 : 2013	Fruits and vegetables — Physical conditions in cold stores — Definitions and measurement (*first revision*)
7730 : 1975	Guide for storage of pears
7731 : 1975	Guide for storage of peaches
8453 : 1977	Code of practice for construction of polyethylene embedded earthen bins for bulk storage of food grains
9303 : 1979	Guide for cold storage of table grapes
9304 : 1979	Guide for storage of mangoes
9311 : 2001 / ISO 1673 : 1991	Onions — Guide for storage (*first revision*)
9696 : 1980	Code of practice for installation of farm drainage tile or pipe system
9979 : 1981	Code for design and laying of mineral filters for tile drain system
10017 : 1981	Code of practice for construction of cocoa beans storage structures
10317 : 1982	Guide for evaluation of soil properties relevant to irrigation
10500 : 2012	Drinking water (*second revision*)
10808 : 1984	Code of practice for installation, operation and maintenance of hydraulic rams
10907 : 1984	Code for design of farm drainage tile or pipe system
11494 : 1986	Code for construction and maintenance of surface farm drainage systems
11495 : 1986	Code for design of surface farm drainage system
11538 : 1986	Code of practice for design and installation of farm drainage pumping plants
11624 : 1986	Guidelines for the quality of irrigation water
11711 : 1986	Recommended criteria for adoptability of different irrigation methods
11816	Storage of cereals and pulses :
(Part 1) : 2010 / ISO 6322-1 : 1996	General recommendations for the keeping of cereals (*first revision*)
(Part 2) : 2009 / ISO 6322-2 : 2000	Practical recommendations(*first revision*)
(Part 3) : 2018	Control of attack by pests (*first revision*)
11965 : 1987 / ISO 6000 : 1981	Round-headed cabbage — Storage in the open
11966 : 1997 / ISO 6663 : 1995	Garlic — Guide to cold storage (*first revision*)
11977 : 1987 / ISO 3959 : 1977	Green bananas — Ripening condition
13062 : 1991	Irrigation equipment and systems— Evaluation of field irrigation efficiencies — Guidelines
13939 : 1994	Farm drainage — Intercepter drains for steep hill slopes under plantation crops — Guidelines for laying

IS No.	*Title*
14632 : 1999	Farm drainage system — Performance evaluation of horizontal sub-surface drainage — Guidelines
14634 : 1999	Code of practice for preparation and application of blue green algae as bio-fertilizer in soils
14791 : 2000	Prevention and treatment of blockage problem in drip irrigation system — Code of practice
14792 : 2000	Irrigation equipment — Design, installation and operation of sprinkler irrigation system — Code of Practice
15000 : 2013	Hazard analysis and critical control point (HACCP) — Requirements for any organization in the food chain
15691 : 2006	Guidelines for storage and transportation of bamboo shoot
15930 (Part 1) : 2018	Requirements for good agricultural practices — IndiaGAP Part 1: Crop base
IS/ISO 22000 : 2018	Food safety management systems — Requirements for any organization in the food chain (*first revision*)
IS/ISO TS 22003 : 2013	Food safety management systems — Requirements for bodies providing audit and certification of food safety management systems (*first revision*)

(*Continued from second cover*)

Part 3	Combinable crop base
Part 5	Coffee base
Part 6	Livestock base
Part 7	Poultry base
Part 8	Cattle and sheep base
Part 9	Dairy base

In the formulation of this Indian Standard, considerable assistance has been derived from the draft document prepared by Agricultural and Processed Food Products Export Development Authority (APEDA).

NOTE — The standards given in Annex B may be read to facilitate the implementation of this standard and are for guidance purpose.

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